

REMARKS

The non-final Office Action mailed December 17, 2003 has been reviewed and carefully considered. Claims 1-31 are pending in the application. Claims 1-31 were rejected.

In paragraph 2 on page 2 of the Office Action, claims 1-8, 10-11, 13-15, 18-31 were rejected under 35 U.S.C. § 102(b) over Niwa (U.S. Patent No. 5,371,873).

In paragraph 2 on page 9 of the Office Action, claims 9 and 12 were rejected under 35 U.S.C. § 103(a) over Niwa.

In paragraph 2 on page 10 of the Office Action, claims 16-17 were rejected under 35 U.S.C. § 103(a) over Niwa in view of Popelka (U.S. Patent No. 6,081,883).

Applicants respectfully traverse the §§ 102(b) and 103(a) rejections. To establish a *prima facie* case for rejection under 35 U.S.C. § 102, all the claim limitations must be taught, disclosed or suggested by the cited reference. To establish a *prima facie* case for rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the cited prior art references, *see* M.P.E.P § 2143.01. In this instance the requirements are not present and a *prima facie* rejection fails under 35 U.S.C. §§ 102(b) and 103(a) because the Office Action fails to cite a reference or references that teach, disclose or suggest all the claim limitations of Applicants' application.

The instant application focuses on a method for increasing print job throughput in printer spooling by "receiving a print job having associated print data; writing the print data to a storage device; reading the print data from the storage device concurrently with the writing of the print data to the storage device; and printing the print data read from the storage device."

More specifically, Applicants' application requires "reading the print data from the storage device concurrently with the writing of the print data to the storage device." The concurrent spooling and despooling allows print processing of a print job that is directed to storage to be initiated as soon as any data for the job exists on the hard disk.

Niwa, unlike Applicants' application, focuses on "image data processing terminal equipment coupled to an external device allowing independent use of memory area by the external device." Niwa describes its laser beam printer 1 by stating, "[t]he bit map output/select

circuit 30 selectively carries out the following three data procedures for the bit map image data produced and output by the bit map processing circuit 22. The first procedure is to write the bit map image data into the storage unit 21 in accordance with an instruction from the host computer 2. The second procedure is to send the bit map image data to the printing device 23 so that a corresponding image is printed on a sheet. The third procedure is to send back the bit map image data to the host computer 2," column 5, lines 11-21. Niwa does not teach performing any of the procedures concurrently. Rather, according to Niwa, bit map output/select circuit 30 selectively carries out three data procedures. Therefore, Niwa does not teach, disclose or suggest at least "reading the print data from the storage device concurrently with the writing of the print data to the storage device," from the instant application.

Furthermore, Niwa, describing a particular aspect of the laser printer 1, states at column 8, lines 8-13, "[a]fter registering the buffer-and-print command, data which is supplied from the host computer 2 and which is to be written in the data name matching the registered pattern is temporarily written into the storage unit 21 of the laser beam printer 1 and is then printed." However, storage unit 21 in Niwa does not send data written in the data name matching the registered pattern to the printer. Rather, bit map output/select circuit 30 selectively carries out the steps of writing data, sending data to a printing device and sending back the data to the host computer, see column 5, lines 11-21 and Fig 2. The processes performed by bit map output/select circuit 30 are discrete and separate, and therefore Niwa does not teach, disclose or suggest "reading the print data from the storage device concurrently with the writing of the print data to the storage device."

The Office Action incorrectly asserts that Niwa's statement "[w]hen the automatic printing operation is set, it is possible to simultaneously execute the printing operation and the data transfer operation at reduced times, as in the case of the non-registered automatic print," at column 10, lines 29-31, anticipates Applicants' application. In Niwa, "[a]fter registering the automatic print processing pattern, data which is supplied from the host computer 2 with the data name that matches the registered pattern is written into the storage unit 21 of the laser beam printer 1, and is then printed automatically," column 7, lines 54-56. In order to carry out automatic printing in Niwa, the bit map output/select circuit 30 must carry out at least two

discrete procedures: “write the bit map image data into the storage unit 21,” and “send the bit map image data to the printing device 23 so that a corresponding image is printed on a sheet,” see column 5, lines 11-21 and Fig 2. Niwa does not teach, disclose or suggest “reading the print data from the storage device concurrently with the writing of the print data to the storage device.”

Popelka fails to remedy the deficiencies of Niwa. Popelka focuses on a “processing system with dynamically allocatable buffer memory.” Popelka discusses a write buffer 230 where “concurrent streams of data can be supported in and out of the write buffer 230,” column 11, lines 60-61. Popelka does not discuss concurrently reading and writing a print job’s associated print data, however. Therefore, Popelka does not teach, disclose or suggest “reading the print data from the storage device concurrently with the writing of the print data to the storage device”

Niwa and Popelka, alone or in combination, fail to teach, disclose or suggest all of the elements recited in the independent claims of Applicants’ application. Thus, the Section 102 rejection is improper and should be withdrawn. Because Niwa in view of the prior art or Niwa and Popelka in combination, fails to teach, disclose or suggest all of the elements of the claims from the instant application, the Section 103 rejection is improper. Accordingly, applicants request that the Section 103 rejection be withdrawn.

Dependent claims 2-17, 19-24 and 26-29 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 1, 18 and 25. Further dependent claims 2-17, 19-24 and 26-29 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-17, 19-24 and 26-29 are patentable over the cited references.

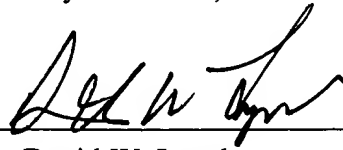
On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

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If a telephone conference would be helpful in resolving any issues concerning this communication, please contact attorney for Applicants, David W. Lynch, at 651-686-6633 Ext. 116.

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